

# Grilamid® L 25H FWA black 9225

Polyamide 12

EMS-GRIVORY

## Message:

Grilamid® L 25H FWA black 9225 is a Polyamide 12 (Nylon 12) material. It is available in Asia Pacific, Europe, Latin America, or North America for injection molding.

Important attributes of Grilamid® L 25H FWA black 9225 are:

Flame Rated

Food Contact Acceptable

Heat Stabilizer

High Viscosity

Typical applications include:

Plumbing/Piping/Potable Water

Food Contact Applications

Consumer Goods

Household Applications

Industrial Applications

| General Information |      |                                      |                   |             |
|---------------------|------|--------------------------------------|-------------------|-------------|
| Additive            |      | Heat Stabilizer                      |                   |             |
| Features            |      | Food Contact Acceptable              |                   |             |
|                     |      | Heat Stabilized                      |                   |             |
|                     |      | High Viscosity                       |                   |             |
|                     |      | Hydrolysis Resistant                 |                   |             |
| Uses                |      | Consumer Applications                |                   |             |
|                     |      | Household Goods                      |                   |             |
|                     |      | Industrial Applications              |                   |             |
| Agency Ratings      |      | ACS Unspecified Rating               |                   |             |
|                     |      | DVGW W270                            |                   |             |
|                     |      | EU Food Contact, Unspecified Rating  |                   |             |
|                     |      | FDA Food Contact, Unspecified Rating |                   |             |
|                     |      | KTW Unspecified Rating               |                   |             |
|                     |      | NSF 51                               |                   |             |
|                     |      | NSF 61                               |                   |             |
|                     |      | WRAS Unspecified Rating              |                   |             |
| Appearance          |      | Black                                |                   |             |
| Forms               |      | Granules                             |                   |             |
| Processing Method   |      | Injection Molding                    |                   |             |
| Physical            | Dry  | Conditioned                          | Unit              | Test Method |
| Density             | 1.01 | --                                   | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage   |      |                                      |                   | ISO 294-4   |

|                                  |            |             |                   |                 |
|----------------------------------|------------|-------------|-------------------|-----------------|
| Across Flow                      | 1.1        | --          | %                 |                 |
| Flow                             | 0.90       | --          | %                 |                 |
| Water Absorption                 |            |             |                   | ISO 62          |
| Saturation, 23°C                 | 1.5        | --          | %                 |                 |
| Equilibrium, 23°C, 50% RH        | 0.70       | --          | %                 |                 |
| Hardness                         | Dry        | Conditioned | Unit              | Test Method     |
| Shore Hardness (Shore D, 15 sec) | --         | 70          |                   | ISO 868         |
| Mechanical                       | Dry        | Conditioned | Unit              | Test Method     |
| Tensile Modulus                  | --         | 1100        | MPa               | ISO 527-2       |
| Tensile Stress (Yield)           | --         | 40.0        | MPa               | ISO 527-2       |
| Tensile Strain (Yield)           | --         | 12          | %                 | ISO 527-2       |
| Nominal Tensile Strain at Break  | --         | > 50        | %                 | ISO 527-2       |
| Impact                           | Dry        | Conditioned | Unit              | Test Method     |
| Charpy Notched Impact Strength   |            |             |                   | ISO 179/1eA     |
| -30°C                            | --         | 7.0         | kJ/m <sup>2</sup> |                 |
| 23°C                             | --         | 10          | kJ/m <sup>2</sup> |                 |
| Charpy Unnotched Impact Strength |            |             |                   | ISO 179/1eU     |
| -30°C                            | --         | No Break    |                   |                 |
| 23°C                             | --         | No Break    |                   |                 |
| Thermal                          | Dry        | Conditioned | Unit              | Test Method     |
| Heat Deflection Temperature      |            |             |                   |                 |
| 0.45 MPa, Unannealed             | 115        | --          | °C                | ISO 75-2/B      |
| 1.8 MPa, Unannealed              | 45.0       | --          | °C                | ISO 75-2/A      |
| Continuous Use Temperature       |            |             |                   | Internal Method |
| -- <sup>1</sup>                  | 100 to 120 | --          | °C                |                 |
| -- <sup>2</sup>                  | 150        | --          | °C                |                 |
| Melting Temperature <sup>3</sup> | 178        | --          | °C                | ISO 11357-3     |
| CLTE                             |            |             |                   | ISO 11359-2     |
| Flow                             | 1.2E-4     | --          | cm/cm/°C          |                 |
| Transverse                       | 1.4E-4     | --          | cm/cm/°C          |                 |
| Electrical                       | Dry        | Conditioned | Unit              | Test Method     |
| Surface Resistivity              | --         | 1.0E+12     | ohms              | IEC 60093       |
| Volume Resistivity               | --         | 1.0E+13     | ohms·cm           | IEC 60093       |
| Electric Strength                | --         | 32          | kV/mm             | IEC 60243-1     |
| Comparative Tracking Index       | --         | 600         | V                 | IEC 60112       |
| Flammability                     | Dry        | Conditioned | Unit              | Test Method     |

|                                           |                  |             |                      |
|-------------------------------------------|------------------|-------------|----------------------|
| Flammability Classification<br>(0.800 mm) | HB               | --          | IEC 60695-11-10, -20 |
| Additional Information                    | Dry              | Conditioned | Test Method          |
| ISO Type                                  | PA12, GH, 24-010 | --          | ISO 1874             |

| NOTE |            |  |  |
|------|------------|--|--|
| 1.   | Long Term  |  |  |
| 2.   | Short Term |  |  |
| 3.   | 10°C/min   |  |  |

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